

REMARKS

Claims 1, 2, 4-7, 11-16, 20-22, and 26-38 are pending, with claims 1, 2, 4, 5, 11, 14, 20, 26, and 29 being independent. Claims 8-10 and 17-19 are canceled by virtue of this Amendment, and new claims 26-38 are added.

Claims 2, 11-16, and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by, or in the alternative, as being obvious over, U.S. Patent No. 5,708,485 to Sato et al. (Sato).

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of U.S. Patent No. 5,459,596 to Ueda et al. (Ueda), U.S. Patent No. 5,781,260 to Miyazawa (Miyazawa), U.S. Patent No. 5,835,171 to Hanazawa (Hanazawa), and U.S. Patent No. 5,345,324 to Koseki (Koseki). Finally, claims 1, 2, and 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 10, and 16 of U.S. Patent No. 6,088,070.

Regarding the double-patenting rejection of claims 1, 2, and 4, Applicant submits herewith a Terminal Disclaimer to overcome this rejection. Accordingly, Applicant requests that this rejection be withdrawn.

Regarding the rejection of claims 2, 11-16, and 20-22 under 35 U.S.C. 102(e) as being anticipated by, or in the alternative, as being obvious over Sato, Applicant respectfully submits that Sato does not disclose or fairly suggest all of the elements of at least independent claims 2, 11, 14, and 20, as amended.

For example, amended independent claim 2 recites, "... wherein said capacitor covers at least an active region of said switching element that is overlapped with one corner of a pixel where disclination is likely to occur." As referred to in Applicant's specification, disclination refers to an alignment disorder of liquid crystal molecules due to surface roughness or a lateral electric field (see page 6, lines 18-20). Disclination may be caused by a rubbing operation (see page 12, lines 8-18 and FIG. 5), and, in a region of a pixel, may result in a reduced quality of a display.

As set forth in paragraph 1 of the Office Action, Sato discloses an active matrix display that includes a thin film transistor 7 and storage capacitor 13, among other display elements. The

Office Action admits that Sato is silent regarding the occurrence of disclination, and relies on U.S. Patent No. 5,652,634 to Hirata (Hirata) to provide “... evidence that disclination is inherent in the device of Sato et al. in regions comprising the thin film transistor and storage capacitor” (Id.).

However, even assuming *arguendo* that disclination is inherent in the device of Sato, Applicant respectfully submits that this fact still would not disclose or fairly suggest at least the above-recited limitation. That is, the mere fact that disclination occurs in Sato (or Hirata) does not necessarily or obviously correspond to the claimed (overlapping) **relationship** between the capacitor, the active region of the switching element, and the corner of the pixel wherein disclination is likely to occur, as recited in independent claim 2. In fact, as shown in FIG. 2 of Sato, that reference does not disclose that the capacitor 13 is overlapped with the corner of the pixel.

Similarly, claim 11 recites, “... wherein a disclination of said liquid crystal molecules occurs in a region comprising said one corner, and wherein said thin film transistor and said capacitor are overlapped with said region.” Claim 14 recites, “... wherein a disclination of said liquid crystal molecules occurs in a region comprising one corner of said pixel, and wherein said region and said capacitor overlap with each other.” Claim 20 recites, “... wherein a disclination of said liquid crystal molecules occurs in a region comprising one corner of said pixel, and wherein said thin film transistor and said capacitor are overlapped with said region.” As amended, each of these independent claims recites a relationship between a capacitor and/or thin film transistor with respect to a corner of a pixel (where disclination is likely to occur) that is neither disclosed nor fairly suggested by Sato (or Hirata).

Accordingly, Applicants respectfully submit that claims 2, 11, 14, and 20 are allowable for at least the above reasons, so that dependent claims 12, 13, 15, 16, 21, 22, 32, 34, 35, 36 are allowable for at least the same reasons.

Regarding the rejection of claims 4 and 5 under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Ueda, Miyazawa, Hanazawa, and Koseki, Applicant respectfully submits that similar comments apply.

For example, amended independent claim 4 recites (with emphasis added), "...an orientation film formed on said pixel electrode wherein a surface of the orientation film has been rubbed in one direction from one corner of the pixel ... and an auxiliary capacitor formed between said black matrix and said metal interconnect in each of said pixels, wherein said auxiliary capacitor is positioned so as to cover a part of said pixel including said one corner thereof." Amended independent claim 5 recites, "... wherein a disclination of said liquid crystal molecules occurs in a region comprising said one corner, and wherein said region and said capacitor overlap with each other."

As set forth above, Sato does not disclose or fairly suggest these relationships between the recited capacitor and the pixel corner. The Ueda, Miyazawa, Hanazawa, and Koseki references are cited with respect to other claim features, and, without agreeing to the alleged relevance of these references, Applicant submits that none of the references, whether taken alone, in combination, or in combination with Sato, disclose or fairly suggest the above-recited claim limitations.

As a result, Applicant respectfully submits that independent claims 4 and 5 are allowable for at least the above reasons, so that dependent claims 6, 7, and 33 are allowable for at least the same reasons.

Finally, with respect to new independent claims 26 and 29, Applicant notes that independent claim 26 recites "... wherein a disclination of said liquid crystal molecules occurs in a region comprising one corner of said pixel, and wherein said thin film transistor and said capacitor are overlapped with said region." Claim 29 recites "... wherein a disclination of said liquid crystal molecules occurs in a region comprising said one corner, and wherein said thin film transistor and said capacitor are overlapped with said region."

Accordingly, Applicant submits that independent claims 26 and 29 are allowable for at least the above reasons, so that dependent claims 27, 28, 30, 31, 37, and 38 are allowable for at least the same reasons.

Applicant : Ohtani, et al.
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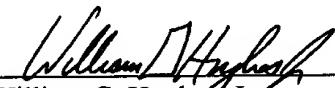
Attorney's Docket No.: 07977-220002 / US3528/3777

Based on the above, all of pending claims 1, 2, 4-7, 11-16, 20-22, and 26-38 are believed to be in condition for allowance, and such action is hereby requested in the Examiner's next official communication.

Enclosed is a \$54.00 check for excess claim fees and a \$110.00 check for the Terminal Disclaimer fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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